

What is claimed is:

- 1 1. A method, comprising:
 - 2 receiving a first schema database;
 - 3 forming a virtual schema including at least a portion of a dataset included
 - 4 within the first database;
 - 5 receiving a first input indicating a criteria;
 - 6 aggregating data of the database into one or more groupings in accordance
 - 7 with the virtual schema and the first input indicating the criteria; and
 - 8 displaying one or more indicators associated with the one or more
 - 9 groupings on an n-dimensional presentation.
- 1 2. The method of claim 1, further comprising:
 - 2 receiving a second input indicating one or more regions;
 - 3 storing the second input as a spatial-object meta data; and
 - 4 aggregating the groupings based upon the spatial-object meta data.
- 1 3. The method of claim 2, further comprising:
 - 2 displaying one or more indicators associated with the one or more
 - 3 groupings in a region associated therewith on an n-dimensional presentation.
- 1 4. The method of claim 2, wherein
 - 2 the region comprises at least one of:
 - 3 a polygon,
 - 4 a circle,
 - 5 a rectangle,
 - 6 an ellipse, and
 - 7 an animal home range.
- 1 5. The method of claim 2, wherein:
 - 2 the second input indicating one or more regions comprises:
 - 3 at least one of:
 - 4 an input from a user,
 - 5 a pre-determined area,

FOOTNOTES

6 a derivation based upon one or more objects on the n-dimensional
 7 presentation, and
 8 a result of a computation.

1 6. The method of claim 5, wherein:
 2 the pre-determined area comprises at least one of:
 3 a zip code,
 4 an area code,
 5 a census tract,
 6 a Metropolitan Statistical Area (MSA),
 7 a nation state,
 8 a state,
 9 a county,
 10 a municipality,
 11 a latitude, and
 12 a longitude.

1 7. The method of claim 5, wherein:
 2 the derivation based upon one or more objects on the n-dimensional
 3 presentation comprises:
 4 a region within a specified distance of a power line.

1 8. The method of claim 5, wherein:
 2 the result of a computation comprises:
 3 computing an animal home range, the home range providing a region
 4 defined by activities of a target;
 5 defining within the region a first ellipse; and
 6 defining within the region a second ellipse approximately orthogonal to the
 7 first ellipse; wherein
 8 an area defined by intersection of the first ellipse and the second ellipse
 9 provides a greatest probability of finding the target.

1 9. The method of claim 8, wherein:
 2 the target comprises at least one of:
 3 a suspect, who perpetrated criminal acts defined by the data,

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4 a customer, who completed transactions in shops defined by the data,
 5 a source of biological material, which caused infections in persons defined
 6 by the data.

1 10. The method of claim 2, wherein:
 2 aggregating the groupings based upon the spatial-object meta data
 3 comprises:
 4 checking whether data points fall within a common region, and
 5 if so, aggregating data represented by the data points.

1 11. The method of claim 3, wherein:
 2 the n-dimensional presentation comprises a map.

1 12. The method of claim 11, wherein:
 2 displaying one or more indicators further comprises:
 3 determining an x, y coordinate for each region on the map;
 4 displaying at least one indicator associated with the one or more groupings
 5 on the map at the x, y coordinate.

1 13. The method of claim 2, further comprising:
 2 receiving a third input indicating a one or more redefined regions;
 3 storing the third input as a redefined spatial-object meta data; and
 4 aggregating into new groupings based upon the spatial-object meta data.

1 14. The method of claim 2, further comprising:
 2 redefining the virtual schema based upon the spatial-object meta data.

1 15. The method of claim 14, wherein:
 2 redefining the virtual schema based upon the spatial-object meta data
 3 comprises:
 4 receiving a third input indicating a criteria;
 5 aggregating data of the database into one or more new groupings in
 6 accordance with the redefined virtual schema and the third input indicating the criteria;
 7 and
 8 displaying one or more indicators associated with the one or more new
 9 groupings on an n-dimensional presentation.

1 16. The method of claim 2, further comprising:
2 receiving a third input indicating a relationship between a first data point
3 and a second data point on the n-dimensional presentation;
4 reflecting the relationship in the virtual schema;
5 aggregating data of the database into one or more new groupings in
6 accordance with the virtual schema; and
7 displaying one or more indicators associated with the one or more new
8 groupings on an n-dimensional presentation.

1 17. The method of claim 1, further comprising:
2 receiving a second database;
3 forming a virtual schema including at least a portion of a dataset included
4 within at least one of the first database and the second database;
5 receiving a first input indicating a criteria;
6 aggregating data of at least one of the first database and the second
7 database into one or more groupings in accordance with the virtual schema and the first
8 input indicating the criteria; and
9 displaying one or more indicators associated with the one or more
10 groupings on an n-dimensional presentation.

1 18. The method of claim 1, further comprising:
2 generating code in accordance with the virtual schema.

1 19. The method of claim 1, further comprising:
2 providing customer centric information to a core of customer data within
3 the database in accordance with the virtual schema.

1 20. A method, comprising:
2 receiving a first schema database;
3 forming a virtual schema including at least a portion of a dataset included
4 within the first database;
5 receiving a first input indicating a criteria;
6 receiving a second input indicating one or more regions;

7 aggregating data of the database into one or more groupings in accordance
8 with the virtual schema, the first input indicating the criteria, and the second input
9 indicating the one or more regions of interest; and
10 displaying one or more indicators associated with the one or more
11 groupings on an n-dimensional presentation.

1 21. A system, comprising:
2 a schema builder that generates one or more virtual schemas including at
3 least a portion of data input from a source, and generates mapping rules controlling data
4 movement into a data warehouse;
5 a metadata repository operative to hold the virtual schemas and mapping
6 rules;
7 a data warehouse builder;
8 a spatial-object data repository;
9 a region checker; and
10 an n-dimensional presentation;
11 wherein the data warehouse is defined by at least a portion of the data
12 input, the virtual schemas, the mapping rules, and the analysis functions.

1 22. The system of claim 21 wherein:
2 the source comprises at least one of a plurality of on line transaction
3 processing (OLTP) databases.

1 23. An apparatus, comprising:
2 means for generating one or more virtual schemas including at least a
3 portion of data input from a source;
4 means for generating mapping rules controlling data movement into a data
5 warehouse;
6 means for holding the virtual schemas and mapping rules;
7 means for generating one or more analysis functions based upon the virtual
8 schemas and data input.

1 24. A computer program product, comprising:
2 code for providing a user interface;
3 code for generating customer data analysis function code;

4 code for scheduling tasks for managing a data warehouse;
 5 code for pre-processing data for movement into the data warehouse;
 6 code for managing creation of the data warehouse;
 7 code for defining customer data analysis functions;
 8 code for performing data source analysis;
 9 code for planning operations of a customer data analysis environment; and
 10 a computer readable storage medium for holding the codes.

1 25. A computer program product, comprising:
 2 code for accessing meta data from a repository;
 3 code for translating entities from a meta model into a data schema to form
 4 a database;
 5 code for providing customer activity correlation queries with access to a
 6 database of a data warehouse;
 7 code for providing customer data analysis functions;
 8 code for providing analysis results to at least one of a plurality of business
 9 applications; and
 10 a computer readable storage medium for holding the codes.

1 26. A customer data analysis report produced according to the method
 2 of claim 1.

1 27. A method, comprising:
 2 providing a focal group, comprising:
 3 at least one of a plurality of core components; and
 4 at least one of a plurality of classification components providing
 5 classifications for information relating to the core components; and
 6 providing at least one customized group, comprising:
 7 at least one of a plurality of customer activity components related
 8 to the core component; and
 9 at least one of a plurality of activity lookup components related to
 10 at least one of the customer activity components;
 11 wherein the focal group and the customized group comprise a reverse star
 12 schema meta model.

- 1 28. A computer readable storage medium containing information
2 organized according to the method of claim 27.

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FOOTNOTES